

**JUKI****AUTOMATION SYSTEMS****KE 2000 (M/L/E)  
INSTALLATION CHECKLIST**

MODEL NUMBER:	KE 2060L
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SERIAL NUMBER:	265-62252	
SECTION	COMPLETED BY	DATE
I		12/19/20
II		12/20
III		12/20
IV		
V		

**SECTION I: PRE-INSTALLATION**

- ☒ Customer contacted
- ☒ Confirmed machine and accessory arrival (no damage)
- ☒ Customer confirmed presence of proper power (220V, 3 phase)
- ☒ Confirmed presence of proper compressed air 71+psi, 15cfm (2030), 9cfm for all other models

**SECTION II: INCOMING INSPECTION**

- ☒ Customer uncrated machine (or see below)
- ☒ Customer placed machine on floor (or see below)
- ☐ Juki Automation Systems uncrated machine.
- ☐ Juki Automation Systems placed machine on floor.
- ☒ Document (with pictures) damage to crate and/or machine (if any exists).
- ☒ Advised customer that machine is sent F.O.B. Juki Automation Systems (where applicable) and all damage claims must be submitted to the customer's carrier.
- ☒ All accessories, options, and manuals are inventoried and inspected for damage.
- ☒ Any discrepancies noted on the "Incoming Inspection Deficiencies" table on this form (reference the Final Inspection section of this checklist).

**SECTION III: SETUP**

- ☒ Have a signed copy of the shipping document (if available).
- ☒ Unpack machine, remove screws holding X, Y, and Z-axis, & remove other packing material.
- ☒ Place and level the machine.
- ☒ Remove front and rear covers and re-seat all cables and PWB's.
- ☒ Connect power (220 VAC, 3 phase) and measure input voltage.
- ☒ Connect input air and verify it is clean, dry, and oil free.
- ☒ Measure all DC power supply voltages.
- ☒ Verify that the latest EPROMs (IO and Base feeder board, and MTC if applicable) software (MMIF, XMP, VCS) are installed.
- ☒ Double check for any packing materials or other potential crash hazards. When clear, turn on the machine power, and home it.
- ☒ Turn on power.

**JUKI AUTOMATION SYSTEMS, INC.**507 Airport Blvd., Morrisville, North Carolina 27560, USA  
Telephone (919) 460-0111, Fax (919) 469-0480**EXHIBIT**

B

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- ☒ Run warm-up for 10-20 minutes.
- ☒ Exercise individual machine functions in Manual Mode. Example: Knock Pins, Light Tower, ATC, and OCCVCS Lights.
- ☒ Install all machine options.
- ☒ Enable and calibrate all machine options in MS Parameters and machine setup.
- ☒ Inspect and test all installed options to make sure they are working properly and adjust if necessary.
- ☒ Test all Emergency Stop switches for functionality.
- ☒ Verify that the lasers are clean and within specification.
- ☒ Explain to customer about use of "setup key" and requirement for this to be used by trained personnel ONLY.

**MACHINE SETUP:**

- ☐ Upgrade software if necessary.
- ☐ Perform self calibrations.
- ☐ Teach the no-nozzle vacuum level for each head (compensates for altitude variations).
- ☐ Perform ATC setup.
- ☐ Place components on test PWB (using CAD data) to verify accuracy.

**SECTION IV: CUSTOMER TRAINING**

<input checked="" type="checkbox"/> CUSTOMER DOES NOT WANT OR DOES NOT NEED TRAINING	
Comments: _____	
_____	
Customer Name: _____	
Signature: _____	Date: _____

**POWER-UP SEQUENCE:** *Explain and demonstrate the following*

- ☐ Location of the power switch and main circuit breaker.
- ☐ How to adjust air regulator.
- ☐ How to drain the air filter.
  
- ☐ Identify and explain major parts of the machine:
  - Head assembly and components
  - X&Y axis drive motors and belts
  - Conveyor
  - CAL block
  - Monitors (OCC & GUI)
  - ATC and nozzles
  - Feeder banks

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- ☐ Machine safety features:
  - E-Stop switches
  - Cover switches
  - Setup key
  - Explain that the machine will not run production with rear cover open.
  - Feeder float detectors
  - Area Sensors (if applicable)

- ☐ Power-up sequence (related applications loaded during boot).

### APPLICATION MANAGER: Show and explain the following:

- ☐ Main menu.
- ☐ Menu navigation:
  - Tab moves forward from box to box
  - CTRL+F6 to go to next window in Editor
  - Shift+Tab moves backwards from box to box.
  - Arrow keys move the cursor within box
- ☐ Use of the HOD:
  - Explain the danger in using the Max-Min Z-axis up-down button VS the manual Z-axis up and down buttons.
  - Multiple "Head" pages (press head repeatedly or press "Dev. Sel.").
- ☐ Never close "CMD32.EXE" or "RTX/RTSS" applications
- ☐ Explain use of User Levels (change passwords if requested). Obtain instructions from manager before determining which levels to train customer on.

### FILE OPERATIONS: Explain the following:

- ☐ All items and sub menus in Toolbar.
- ☐ How the "Save-As" feature allows a file to easily be saved as another machine type onto a diskette.
- ☐ File Management (uses Windows NT Explorer)

### MACHINE SETUP: Explain the following:

- ☐ How to set vacuum value without nozzle.
- ☐ How to change nozzle setup.
- ☐ How to set Shape Edge Reference value.
- ☐ How to set Hole Reference value (rarely used).
- ☐ Device Enable (and Disable) function and usage (i.e. disable items to continue running in emergency situations).
- ☐ How to set MTC Pick position if necessary.

### MAINTENANCE: Explain and show the following:

- ☐ Menus in Manual Control.
- ☐ How to use "Conveyor" to set up board.
- ☐ Demonstrate how to adjust stopper pin position.
- ☐ Demonstrate how to adjust Rear X-Clamp position.
- ☐ Demonstrate how to adjust Y-Clamp and Rear X-Clamp pressures.
- ☐ Demonstrate how to check status of conveyor sensors.

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**PROGRAM EDITOR:** *Explain the following:*

- ☐ All items under "Program Editor", "PWB Data"
  - ☐ How to set "PWB Layout Offset."
  - ☐ How to set "Hole Reference" if necessary (rarely used).
  - ☐ How to set up a single, matrix, and non-matrix board.
  - ☐ Demonstrate how to teach BOC mark coordinates & vision data (with both L & R cameras on 2030).
  - ☐ Explain and demonstrate the use of the polarization filter assembly.
- ☐ Items and pull down menus in "Placement Data."
  - ☐ Explain "Head" assignments (especially for 2030).
  - ☐ Demonstrate Place Tracking. Demonstrate how to switch between auto and manual.
  - ☐ Explain benefits of using CAD data for placements and BOC coordinates.
  - ☐ Explain how to use 1, 2, & 3 point teaching.
- ☐ Explain all items in "Component Data".
  - ☐ The difference between component form and component list.
  - ☐ How the component list can easily show where incomplete or incorrect data is located in a program.
  - ☐ Explain and demonstrate component measurements.
  - ☐ Review all expansion data sub-screens (centering, additional info, expansion, etc.).
- ☐ Explain all items and menus under "Pick Data."
  - ☐ Importance of feeder spacing for optimum performance.
  - ☐ How to program a matrix tray.
  - ☐ How to program a vibratory/belt feeder.
  - ☐ Explain difference between "auto" and "manually" assigning pick positions.
  - ☐ Demonstrate use of Feeder Layout window to move, copy, etc. feeders.
  - ☐ Demonstrating correct way to teach pick point (X, Y, and Z).
- ☐ Demonstrate Pick Tracking.
  - ☐ Demonstrate how to switch between auto and manual.
  - ☐ Demonstrate how the component is outlined and how this will help find programming errors.
  - ☐ Explain why to teach the center of the pocket and not the center of the component.
- ☐ Explain all items and menus under "Vision Data" (2020 and 2040 only).
  - ☐ Why having a component data sheet is needed when auto-recognition of a vision centered component is not possible.
  - ☐ Explain lighting controls and general concept of the 3 lighting methods.
- ☐ Explain how to use "Data Completion Status".
- ☐ Explain each choice in "Optimization" and optimize an actual production file.
  - ☐ Review feeder layout after optimizing a file.

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- ☐ Enable a database in the Editor (Environment Settings)
- ☐ Open the database file and demonstrate import function.
- ☐ Create a few new components and component types and show use of component type function.
- ☐ Return to program editor and demonstrate how component data is automatically found in DB and updated.
- ☐ Demonstrate other DB functions (call list, re-search, etc.)

**PRODUCTION:** Explain the following:

- ☐ Items and menus under "Production".
- ☐ Three different Modes of Production (for 2030 only).
- ☐ How trial mode is used for sample placements or components.
- ☐ All items under "Part no. setup", including ability to set warning levels
- ☐ Changing component data without exiting the production mode.
- ☐ Items and sub menus under "Management Information".

**PREVENTATIVE MAINTENANCE:**

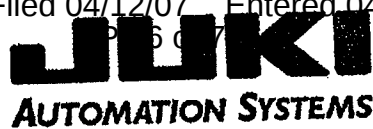
- ☐ What tools and supplies come with the machine.
- ☐ Scheduled Maintenance table. Review Maintenance chapter in Instruction manual line by line and identify which part referenced.
- ☐ Explain and demonstrate Self-Calibration (manager and above level users only)
- ☐ Explain and demonstrate Laser Diagnostics.
- ☐ Minimum acceptable level for lasers.

**PERSONS TRAINED:**


**SECTION V: FINAL INSPECTION:**

- ☐ Place components on test board and verify accuracy visually with customer.
- ☐ Ensure that the deficiencies *affecting performance* found in Incoming Inspection have been corrected.
- ☐ Resolve or summarize actions that have/will be taken to correct deficiencies not affecting performance.
- ☐ MS Parameters and machine data backed up on floppy disk. Copies were given to the customer and explained the importance of the information in the files.

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**INCOMING INSPECTION DEFICIENCIES:**

DEFICIENCY	FIXED (Y/N)

**JUKI AUTOMATION SYSTEMS USE ONLY**

- ☐ Field service price sheet given to the customer.
- ☐ Help numbers given to the customer.
- ☐ Service reports filled out.
- ☐ MS Parameters and installation checklist forwarded to the Technical Administrator or designee.

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**JUKI****AUTOMATION SYSTEMS****KE 2000 (M/L/E)****INSTALLATION ACCEPTANCE**

Customer Name:	DELTA PACARD ELECTRIC SYSTEMS		
Contact:	Title:		
Ship to Address:	BLDG #23 DELTA PACARD BROOKHAVEN INDUSTRIAL PARK		
City:	BROOKHAVEN	State/Country:	MS Zip: 39101
Telephone:	Fax:		
Software Versions:	MMIF: I/O: Base Feeder CPU: VCS: Flexline Database: HLC: (Other):	Serial Number:	205-62252

**JUKI AUTOMATION SYSTEMS USE ONLY**

<input type="checkbox"/>	Operator available for complete training.
<input type="checkbox"/>	Checklist completed.
<input type="checkbox"/>	Additional training required. Describe:

Juki Automation Systems Engineer Signature: 

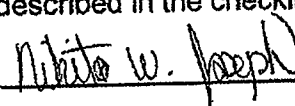
Date: 12/20/05

Dear Customer:

Your machine has been installed by factory trained and authorized personnel. Proper maintenance and care will ensure a long life for your machine. We are committed to providing the best customer service possible. If your installation is not to your satisfaction, please call (919) 460-0111, or (510) 249-6700 and ask to speak to the Service Manager.

<input type="checkbox"/>	Installation was completed.
<input type="checkbox"/>	Manuals received.
<input type="checkbox"/>	Checklist completed with the Service Engineer.

By signing below, you indicate your acceptance of the machine described above and that satisfactory training as described in the checklist, has been provided.

Customer's Signature:  Date: 12/20/05

Printed Name: Nikita W. Joseph

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